

Chapter 2

Intelligence Preparation of the Battlefield and Reconnaissance and Surveillance Planning

An engineer recon team performs several critical tasks in support of the supported-unit commander's concept of an operation. The recon team's success or failure often results in the force's success or failure. As part of the commander's "eyes" and "ears", the recon team must maintain communication with the tactical operations center (TOC). This communication link is critical for the recon team to transmit intelligence gained to the TOC and for the TOC to pass to the recon team any current information on the friendly and enemy situations.

The engineer recon team leader must clearly understand the commander's intent and know what is expected of his team in each phase of the operation. Also, he must be given the specific named areas of interest (NAIs) that his team is to observe and the exact information he is expected to gather within each NAI. The engineer recon team must be focused on the NAIs that concern obstacles, mobility, or enemy engineer assets. However, the team should be prepared to report on non-engineer-specific information as part of the combined-arms recon effort. The team must be provided with all of the available information concerning the type of obstacles they may encounter during the recon.

The engineer recon team must be a part of the supported unit's reconnaissance and surveillance (R&S) plan. This ensures that commanders get the information they need to fight and win the battle. A maneuver brigade and its subordinate battalions will produce R&S plans. The brigade plan will task the subordinate battalions, as well as brigade assets, and these tasks will be incorporated into each subordinate battalion's plan.

NOTE: The R&S plan is developed very early in the planning process because it is critical to get recon assets into a mission as early as possible.

INTELLIGENCE PREPARATION OF THE BATTLEFIELD (IPB)

IPB is a systematic approach to analyzing the an enemy, the weather, and the terrain in a specific geographic area. It integrates enemy doctrine with the weather and terrain as they relate to the mission and the specific battlefield environment. This is done to determine and evaluate enemy capabilities, vulnerabilities, and probable courses of action (COAs). See FM 34-130 for a complete discussion of IPB.

Table 2-1 summarizes the engineer's participation in the IPB process. The Intelligence Officer (US Army) (S2) and the engineer staff conduct their analysis by applying enemy doctrinal templates (which include obstacle templates) to specific terrain. This becomes a situational template (SITE MP). A SITE MP is basically a doctrinal template with terrain and weather constraints applied. It is a graphic description of an enemy's disposition should he adopt a particular COA. It shows how enemy forces might deviate from doctrinal dispositions, frontages, depths, and echelon spacing to account for the effects of terrain and weather, and it focuses on specific mobility corridors. A SITE MP is a visual technique. By placing a doctrinal template over a segment of a mobility corridor, the analyst adjusts units or equipment dispositions to depict where they might actually be deployed in the situation. Time and space analysis is important in developing a SITE MP, which is used during the war-gaming process. For further discussion of a SITE MP, refer to FM 34-130.

Table 2-1. Engineer input to the IPB process

Engineer Input	IPB Steps	Output
Terrain data Available threat engineer assets	DEFINE THE BATTLEFIELD ENVIRONMENT	
Terrain analysis (OCOKA)	DESCRIBE THE BATTLEFIELD'S EFFECTS	MCOO
Threat engineer doctrine Engineer HVTs Threat engineer capabilities	EVALUATE THE THREAT	Intel estimate
Threat engineer support to each threat COA	DETERMINE THREAT COAS	SITE MP Listing of HVT Identify NAIs Event template

A SITE MP is the basis for event templating. An event template is a model against which enemy activity can be recorded and compared. It represents a sequential projection of events that relate to space and time on the battlefield and indicates the enemy's ability to adopt a particular COA. By knowing what an enemy can do and comparing it with what he is doing, it can be predicted what he will do next. This is an important analysis factor in determining the enemy's posture and movement. Knowing when and where enemy activity is likely to occur on the battlefield will provide indicators of enemy intentions or will verify that projected events did or did not occur.

As the threat visualization process develops, a number of critical locations will become apparent (key terrain and man-made features such as bridges and fords). These areas are important because significant events and activities will occur there. It is within these areas that targets will appear. These areas are designated as NAIs. NAIs must be observed to be effective. Therefore, the number and location of NAIs designated is tied to the unit's ability to observe them.

NAIs may also be developed when the staff produces the decision-support template (DST). The commander and his staff create a DST during the

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decision-making process. A DST graphically represents the projected situation, identifying where a decision must be made to initiate a specific activity or event.

NAIs developed during the IPB and decision-making process are prioritized, and recon assets are tasked to collect information to support the commander's information requirements (IR). Engineer recon teams should be used for those NAIs requiring engineer expertise.

In the offense, a maneuver unit's S2, with the engineer staff's assistance, will determine how and where an enemy will fight, how enemy direct-fire systems and obstacles are arrayed, and what counterattack routes the enemy is likely to take. The assistant brigade engineer (ABE) and the brigade S2 will also provide input on enemy scatterable-mine (SCATMINE) capability and where the mines may be placed, based on how the enemy is predicted to fight. The ABE and the S2 provide any available information about existing obstacles on the avenue of approach or mobility corridor. The TF S2 and the engineer company executive officer (XO)/engineer platoon leader will incorporate this information into their IPB.

In the offense, an engineer recon team's primary focus should be on OBSTINTEL as discussed in FM 90-13-1, Chapter 2. This includes but is not limited to—

- Obstacle location.
- Obstacle orientation.
- The presence of wire.
- Gaps and bypasses.
- Minefield composition (buried or surface antitank [AT] and antipersonnel [AP] mines and antihandling devices [AHDs]) and depth.
- Mine types.
- The location of enemy direct-fire weapons.

In the defense, a maneuver unit's S2, with the engineer staff's assistance, conducts a terrain analysis to determine an enemy's avenues of approach. The ABE and the brigade S2 work closely with the TF S2 and the engineer company XO/engineer platoon leader in the TF's TOC to provide input on enemy engineer assets and enemy engineer COAs and to template the enemy's obstacle use. A recon team may be focused on—

- Obtaining information about planned routes to be used during counterattacks, repositioning, or retrograde operations.
- Augmenting the TF scouts to identify enemy engineer equipment and activity.
- Observing locations where friendly forces will emplace scatterable minefields to provide information on its effectiveness and to call fires on enemy vehicles.

- Observing NAIs where the enemy is expected to employ scatterable minefields.

R&S PLANNING

From an event template and a DST, the S2, in coordination with the Operations and Training Officer (US Army) (S3), prepares a detailed R&S plan that graphically depicts where and when the recon elements should look for enemy activity. The R&S plan must direct specific tasks and priorities to all R&S elements: company teams, scout platoons, engineer recon teams, combat observation and lazings teams (COLTs), ground-surveillance radar (GSR), and patrols. The supported battalion's S2 translates the R&S plan into operational terms and graphics. During recon operations, the S2 designates NAIs for the engineer recon team. The S3 maintains overall OPCON of the R&S plan; however, the S2 plans and monitors the R&S plan. The engineer recon team leader further refines the plan to include such things as checkpoints as control measures to guide the team's movement to these objectives.

The supported unit's S2 should brief the recon team leader on the disposition of friendly forces and the unit's scheme of maneuver. The S2 provides the team leader with the current (and projected) R&S and operational graphics and terrain-index-reference-system (TIRS) points to support additional graphics and fragmentary orders (FRAGOs). If the S3 does not brief the recon team leader, the S2 must ensure that the commander's intent is accurately portrayed as he briefs the team leader. The S2 should plan to employ the recon team throughout the mission's entire course. He should provide guidance on when to report, what actions to take on enemy contact, and what CS and CSS assets are available. The engineer commander must ensure that specifics concerning obstacles, terrain, and enemy engineer assets that may be encountered are also included in this briefing. The recon team leader should receive the S2's briefing before he departs the battalion area for his mission. Other options, although less desirable, include receiving this information over the radio or from a messenger sent by the commander.

The engineer staff in either the brigade's or the TF's TOC should do everything possible to assist the engineer recon team leader by coordinating with other battlefield operating system (BOS) elements. These types of coordination are discussed in the following paragraphs.

A fire-support element (FSE) stays abreast of what the team is doing while conducting the mission. This ensures that it provides responsive fire support to the recon team. The engineer staff should coordinate with the fire-support officer (FSO) to discuss the recon team's mission and the unique requirements the team has for fire support. The engineer staff finds out what support is available, where supporting units are located, and what fire-support restrictions exist. The team leader then recommends preplanned targets and target priorities that the FSO will incorporate into a recon team's fire-support plan. The team leader should depart the FSE with an approved target list and/or preplanned fire overlay.

The engineer staff may also coordinate with the appropriate signal officer (engineer battalion, brigade, or TF) if the mission requires communications

support. A retrans or relay support must be requested if the mission dictates. The engineer recon team should not perform relay duties as their primary mission; however, it is desirable for each vehicle used by the recon team to have the capability to act as a retrans station.

The engineer staff also coordinates with any additional elements that may be providing support to the recon effort (such as air-defense artillery [ADA], COLT, GSR, and aeroscouts). Ideally, any linkups should occur at the TOC during daylight and in sufficient time to conduct a thorough briefing and rehearsal with elements that the recon team is attached to or elements that are attached to the recon team. During a route recon, the engineer recon team must know the number, type (track or wheeled), and load classification of vehicles to be used on the reconned routes. This information will determine route trafficability and help decide COAs during the recon.

The engineer staff coordinates with the appropriate unit Supply Officer (US Army) (S4) (from the engineer battalion, brigade, or TF) to ensure that a feasible CSS plan is in place and that the recon team leader understands where all of his logistical support will come from. Detailed discussion of CSS and recon operations is in Chapter 7.

The engineer recon team leader should, as a minimum, have the following materials on hand and available to his soldiers:

- Operational graphics.
- R&S graphics.
- The SITEMP, event template, and notes on the current enemy situation.
- The fire-support overlay.
- CSS plan (resupply, casualty evacuation, maintenance, and recovery) and CSS graphics.
- Communications plan.
- Compromise procedures.
- Disengagement criteria.
- Linkup plan.
- Contingency plan for NAI coverage.

Once in the vicinity of these recon objectives, the recon team confirms or denies the templated information. The team—

- Looks for engineer-specific information about the obstacle, such as the obstacle's composition and any bypasses around it.
- Considers limited obstacle reduction.
- Conducts an analysis of the terrain and soil composition to determine whether mine-clearing blades or mine-clearing line charges (MICLICs) will be successful.
- Recommends the location for obstacle reduction.

The information obtained by the engineer recon team must be relayed to the TOC quickly to allow the S2, the S3, and the engineer staff to analyze the information and ensure rapid dissemination to all units. The engineer staff should ensure that it has a system in place to track all incoming OBSTINTEL and the method of dissemination as well as a system to display confirmed OBSTINTEL graphically as opposed to templated obstacles.